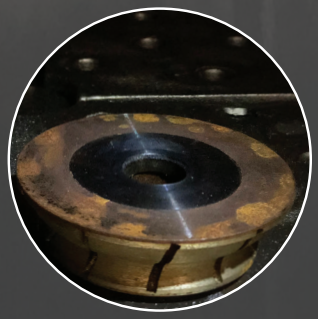
5 STEPS TO THE STONE TOOLS REDRESSING PROCESS

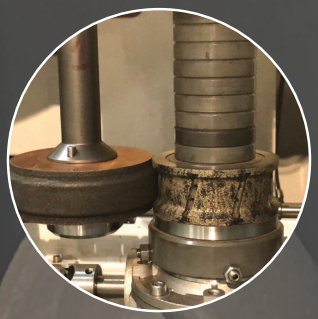
DIAMUT

Diamut tooling is highly designed to achieve tolerances that are extremely tight. The tool redressing process requires extremely skilled operators using a sequence of precision, custom-engineered machines to match original tool profiles precisely.



1. PREPARATION

Any wheel that we receive from a customer is first inspected, cleaned and analyzed.



2. EROSION

To redress finer wheels, Diamut uses a custom-engineered EDM (electric discharge machine). Its copper electrode, specially machined to fit the inverse of each profile, sits a millimeter away and creates an electrical arc that burns away the diamond on each worn wheel.

3. GRINDING

This grinding process is used for diamond wheels that run in position 1. They have protruding diamonds that are bigger than the tolerance, so they don't need electroerosion like finer wheels. When the wheel is mounted, the camera captures its wear conditions, and custom software optically compares it with a CAD drawing of the original profile. Additional readouts let a skilled operator reach a precise angle of accuracy. A diamond wheel is mounted on one side and a grinding wheel on the other. The material disappears as the wheel is machined, allowing for finer adjustments based on the CAD drawing.

4. PUMICE REDRESS

Next the Pumice Grinder, another custom-made Diamut machine, goes to work. Wheels that have been burnt with an EDM or grinded must be touched up. Pumice is used to sharpen and polish them.

5. INSPECTION

This last inspection ensures quality of the final product. It includes a visual inspection and usage of a optical comparator to ensure the accuracy of each profile after the redressing process is completed.

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